

Listing of claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of:

- (a) ~~a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 750 in SEQ ID NO:2;~~
- (b) ~~a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 750 in SEQ ID NO:2;~~
- (c) ~~a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 750 in SEQ ID NO:2;~~
- (d) ~~a nucleotide sequence encoding a polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-349;~~
- (e) ~~a nucleotide sequence encoding the mature TR13 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-349;~~
- (f) ~~a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 231 in SEQ ID NO:61;~~
- (g) ~~a nucleotide sequence encoding a polypeptide comprising amino acids from about 2 to about 231 in SEQ ID NO:61;~~
- (h) ~~a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 138 in SEQ ID NO:61;~~
- (i) ~~a nucleotide sequence encoding a polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-348;~~
- (j) ~~a nucleotide sequence encoding a polypeptide comprising amino acids 1 to 226 of SEQ ID NO:5;~~
- (k) ~~a nucleotide sequence encoding the TR14 extracellular domain;~~
- (l) ~~a nucleotide sequence encoding the TR14 transmembrane domain;~~

- ~~(m)~~ — a nucleotide sequence encoding the TR14 intracellular domain;
- ~~(n)~~ — a nucleotide sequence encoding the TR14 receptor extracellular and intracellular domains with all or part of the transmembrane domain deleted;
- (ea) a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 1001 in SEQ ID NO:40;
- (pb) a nucleotide sequence encoding a polypeptide comprising amino acids from about 2 to about 1001 in SEQ ID NO:40;
- (ec) a nucleotide sequence encoding a polypeptide comprising amino acids from about 42 to about 1001 in SEQ ID NO:40;
- ~~(fd)~~ a nucleotide sequence encoding a polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-507;
- (se) a nucleotide sequence encoding the mature TR13 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-507;
- (tf) a nucleotide sequence encoding the TR13 extracellular domain encoded by the cDNA clone contained in ATCC Deposit No. PTA-507;
- (ug) a nucleotide sequence encoding the TR13 transmembrane domain encoded by the cDNA clone contained in ATCC Deposit No. PTA-507;
- (vh) a nucleotide sequence encoding the TR13 intracellular domain encoded by the cDNA clone contained in ATCC Deposit No. PTA-507;
- (wi) a nucleotide sequence encoding the TR13 receptor extracellular and intracellular domains, encoded by the cDNA clone contained in ATCC Deposit No. PTA-507, with all or part of the transmembrane domain deleted; and
- (*j) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c), (d), (e), (f), (g), (h), or (i), (j), (k), (l), (m), (n), (o), (p), (q), (r), (s), (t), (u), (v), or (w).

2-3. (Canceled)

4. (Original) The nucleic acid molecule of claim 1, wherein said polynucleotide has the nucleotide sequence in SEQ ID NO:39.

5-6. (Canceled)

7. (Previously presented) The nucleic acid molecule of claim 1, wherein said polynucleotide has the nucleotide sequence in SEQ ID NO:39 encoding the TR13 receptor having the amino acid sequence in SEQ ID NO:40.

8-9. (Canceled)

10. (Original) The nucleic acid molecule of claim 1, wherein said polynucleotide has the nucleotide sequence in SEQ ID NO:39 encoding the mature TR13 receptor having the amino acid sequence in SEQ ID NO:40.

11-12. (Canceled)

13. (Original) The nucleic acid molecule of claim 1, wherein said polynucleotide has the complete nucleotide sequence of the cDNA clone contained in ATCC Deposit No. PTA-507.

14-15. (Canceled)

16. (Original) The nucleic acid molecule of claim 1, wherein said polynucleotide has the nucleotide sequence encoding the TR13 receptor having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-507.

17-18. (Canceled)

19. (Original) The nucleic acid molecule of claim 1, wherein said polynucleotide has the nucleotide sequence encoding the mature TR13 receptor having the

amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. PTA-507.

20. (Currently amended) An isolated nucleic acid molecule comprising a polynucleotide which hybridizes under stringent hybridization conditions to a polynucleotide having a nucleotide sequence identical to a nucleotide sequence in (a), (b), (c), (d), (e), (f), (g), (h), (i), or (j), ~~(k), (l), (m), (n), (o), (p), (q), (r), (s), (t), (u), (v), (w), or (x)~~ of claim 1, wherein said polynucleotide which hybridizes does not hybridize under stringent hybridization conditions to a polynucleotide having a nucleotide sequence consisting of only A residues or of only T residues.

21. (Currently amended) An isolated nucleic acid molecule comprising a polynucleotide which encodes the amino acid sequence of an epitope-bearing portion of at least 9 amino acids of a TR13 receptor having an amino acid sequence in (a), (b), (c), (d), (e), (f), (g), (h), (i), or (j), ~~(k), (l), (m), (n), (o), (p), (q), (r), (s), (t), (u), (v), (w), or (x)~~ of claim 1.

22. (Canceled)

23. (Currently amended) The isolated nucleic acid molecule of claim 21, which encodes an epitope-bearing portion of a TR13 receptor selected from the group consisting of: ~~a polypeptide comprising amino acid residues from about 2 to about 170 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 210 to about 318 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 343 to about 480 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 548 to about 592 in SEQ ID NO:2; or a polypeptide comprising amino acid residues from about 632 to about 742 in SEQ ID NO:2, or a polypeptide comprising amino acid residues from about 1 to about 262 in SEQ ID NO:40, or a polypeptide comprising amino acid residues from about 264 to about 423 in SEQ ID NO:40, or a polypeptide comprising amino acid residues from about 437 to about 789 in SEQ ID NO:40, or~~ and a polypeptide comprising amino acid residues from about 791 to about 1001 in SEQ ID NO:40.

24-27. (Canceled)

28. (Original) The isolated nucleic acid molecule of claim 1, which encodes the TR13 receptor extracellular domain.

29. (Original) The isolated nucleic acid molecule of claim 1, which encodes the TR13 receptor transmembrane domain.

30. (Original) The isolated nucleic acid molecule of claim 1, which encodes the TR13 receptor intracellular domain.

31-33. (Canceled)

34. (Original) A method for making a recombinant vector comprising inserting an isolated nucleic acid molecule of claim 1 into a vector.

35. (Original) A recombinant vector produced by the method of claim 34.

36. (Original) A method of making a recombinant host cell comprising introducing the recombinant vector of claim 35 into a host cell.

37. (Original) A recombinant host cell produced by the method of claim 36.

38. (Original) A recombinant method for producing a TR13 polypeptide, comprising culturing the recombinant host cell of claim 37 under conditions such that said polypeptide is expressed, and recovering said polypeptide.

39-63. (Canceled)

64. (Previously presented) An isolated nucleic acid molecule comprising a polynucleotide encoding a first amino acid sequence at least 95% identical to a second amino acid sequence selected from the group consisting of:

- (a) amino acid residues 1 to 1001 of SEQ ID NO:40;
- (b) amino acid residues 2 to 1001 of SEQ ID NO:40;
- (c) amino acid residues 42 to 1001 of SEQ ID NO:40;
- (d) amino acid residues 296 to 1001 of SEQ ID NO:40;
- (e) amino acid residues 1 to 906 of SEQ ID NO:40;
- (f) amino acid residues 2 to 906 of SEQ ID NO:40;
- (g) amino acid residues 42 to 906 of SEQ ID NO:40; and
- (h) amino acid residues 296 to 906 of SEQ ID NO:40.

65. (Previously presented) The isolated nucleic acid molecule of claim 64, wherein said first amino acid sequence is at least 95% identical to (a).

66. (Previously presented) The isolated nucleic acid molecule of claim 65, wherein said first amino acid sequence is (a).

67. (Previously presented) The isolated nucleic acid molecule of claim 66, which comprises nucleotides 58 to 3060 of SEQ ID NO:39.

68. (Previously presented) The isolated nucleic acid molecule of claim 64, wherein said first amino acid sequence is at least 95% identical to (b).

69. (Previously presented) The isolated nucleic acid molecule of claim 68, wherein said first amino acid sequence is (b).

70. (Previously presented) The isolated nucleic acid molecule of claim 69, which comprises nucleotides 61 to 3060 of SEQ ID NO:39.

71. (Previously presented) The isolated nucleic acid molecule of claim 64, wherein said first amino acid sequence is at least 95% identical to (c).

72. (Previously presented) The isolated nucleic acid molecule of claim 71, wherein said first amino acid sequence is (c).

73. (Previously presented) The isolated nucleic acid molecule of claim 72, which comprises nucleotides 181 to 3060 of SEQ ID NO:39.

74. (Previously presented) The isolated nucleic acid molecule of claim 64, wherein said first amino acid sequence is at least 95% identical to (d).

75. (Previously presented) The isolated nucleic acid molecule of claim 74, wherein said first amino acid sequence is (d).

76. (Previously presented) The isolated nucleic acid molecule of claim 75, which comprises nucleotides 943 to 3060 of SEQ ID NO:39.

77. (Previously presented) The isolated nucleic acid molecule of claim 64, wherein said first amino acid sequence is at least 95% identical to (e).

78. (Previously presented) The isolated nucleic acid molecule of claim 77, wherein said first amino acid sequence is (e).

79. (Previously presented) The isolated nucleic acid molecule of claim 78, which comprises nucleotides 58 to 2775 of SEQ ID NO:39.

80. (Previously presented) The isolated nucleic acid molecule of claim 64, wherein said first amino acid sequence is at least 95% identical to (f).

81. (Previously presented) The isolated nucleic acid molecule of claim 80, wherein said first amino acid sequence is (f).

82. (Previously presented) The isolated nucleic acid molecule of claim 81, which comprises nucleotides 61 to 2775 of SEQ ID NO:39.

83. (Previously presented) The isolated nucleic acid molecule of claim 64, wherein said first amino acid sequence is at least 95% identical to (g).

84. (Previously presented) The isolated nucleic acid molecule of claim 83, wherein said first amino acid sequence is (g).

85. (Previously presented) The isolated nucleic acid molecule of claim 84, which comprises nucleotides 181 to 2775 of SEQ ID NO:39.

86. (Previously presented) The isolated nucleic acid molecule of claim 64, wherein said first amino acid sequence is at least 95% identical to (h).

87. (Previously presented) The isolated nucleic acid molecule of claim 86, wherein said first amino acid sequence is (h).

88. (Previously presented) The isolated nucleic acid molecule of claim 87, which comprises nucleotides 943 to 2775 of SEQ ID NO:39.

89. (Previously presented) An isolated nucleic acid molecule complementary to the isolated nucleic acid molecule of claim 64.

90. (Previously presented) The isolated nucleic acid molecule of claim 64, wherein said nucleic acid is DNA.

91. (Previously presented) The isolated nucleic acid molecule of claim 64, wherein said nucleic acid is RNA.

92. (Previously presented) The isolated nucleic acid molecule of claim 64, wherein said nucleic acid is double-stranded.

93. (Previously presented) The isolated nucleic acid molecule of claim 64, wherein said nucleic acid is single-stranded.

94. (Previously presented) A composition comprising the nucleic acid molecule of claim 64 and a carrier.

95. (Previously presented) The isolated nucleic acid molecule of claim 64 wherein the nucleic acid molecule further comprises a heterologous polynucleotide sequence.

96. (Previously presented) The isolated nucleic acid molecule of claim 95, wherein said heterologous polynucleotide sequence encodes a heterologous polypeptide.

97. (Previously presented) The isolated nucleic acid molecule of claim 96, wherein said heterologous polypeptide is human serum albumin.

98. (Previously presented) The isolated nucleic acid molecule of claim 96, wherein said heterologous polypeptide is a human IgG Fc region.

99. (Previously presented) A recombinant vector comprising the isolated nucleic acid molecule of claim 64.

100. (Previously presented) The recombinant vector of claim 99 wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

101. (Previously presented) A recombinant host cell comprising the isolated nucleic acid molecule of claim 64.

102. (Previously presented) The recombinant host cell of claim 101 wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

103. (Previously presented) A method for producing a polypeptide comprising

an amino acid sequence selected from the group consisting of:

- (a) amino acid residues 1 to 1001 of SEQ ID NO:40;
- (b) amino acid residues 2 to 1001 of SEQ ID NO:40;
- (c) amino acid residues 42 to 1001 of SEQ ID NO:40;
- (d) amino acid residues 296 to 1001 of SEQ ID NO:40;
- (e) amino acid residues 1 to 906 of SEQ ID NO:40;
- (f) amino acid residues 2 to 906 of SEQ ID NO:40;
- (g) amino acid residues 42 to 906 of SEQ ID NO:40; and
- (h) amino acid residues 296 to 906 of SEQ ID NO:40;

comprising culturing a host cell comprising the nucleic acid molecule of claim 64 under conditions suitable to produce the polypeptide of (a), (b), (c), (d), (e), (f), (g) or (h) and recovering the polypeptide of (a), (b), (c), (d), (e), (f), (g) or (h).

104. (Previously presented) An isolated nucleic acid molecule comprising a polynucleotide encoding a first amino acid sequence at least 95% identical to a second amino acid sequence selected from the group consisting of:

- (a) the amino acid sequence of the full-length TR13 polypeptide encoded by the cDNA contained in ATCC Deposit No. PTA-507;
- (b) the amino acid sequence of the full-length TR13 polypeptide encoded by the cDNA contained in ATCC Deposit No. PTA-507, minus the N-terminal methionine residue;
- (c) the amino acid sequence of the mature TR13 polypeptide encoded by the cDNA contained in ATCC Deposit No. PTA-507;
- (d) the amino acid sequence of the extracellular domain of the full-length TR13 polypeptide encoded by the cDNA contained in ATCC Deposit No. PTA-507;
- (e) the amino acid sequence of the extracellular domain of the full-length TR13 polypeptide encoded by the cDNA contained in ATCC Deposit No. PTA-507, minus the N-terminal methionine residue; and
- (f) the amino acid sequence of the extracellular domain of the mature TR13 polypeptide encoded by the cDNA contained in ATCC Deposit No. PTA-507.

105. (Previously presented) The isolated nucleic acid molecule of claim 104, wherein said first amino acid sequence is at least 95% identical to (a).

106. (Previously presented) The isolated nucleic acid molecule of claim 105, wherein said first amino acid sequence is (a).

107. (Previously presented) The isolated nucleic acid molecule of claim 104, wherein said first amino acid sequence is at least 95% identical to (b).

108. (Previously presented) The isolated nucleic acid molecule of claim 107, wherein said first amino acid sequence is (b).

109. (Previously presented) The isolated nucleic acid molecule of claim 104, wherein said first amino acid sequence is at least 95% identical to (c).

110. (Previously presented) The isolated nucleic acid molecule of claim 109, wherein said first amino acid sequence is (c).

111. (Previously presented) The isolated nucleic acid molecule of claim 104, wherein said first amino acid sequence is at least 95% identical to (d).

112. (Previously presented) The isolated nucleic acid molecule of claim 111, wherein said first amino acid sequence is (d).

113. (Previously presented) The isolated nucleic acid molecule of claim 104, wherein said first amino acid sequence is at least 95% identical to (e).

114. (Previously presented) The isolated nucleic acid molecule of claim 113, wherein said first amino acid sequence is (e).

115. (Previously presented) The isolated nucleic acid molecule of claim 104, wherein said first amino acid sequence is at least 95% identical to (f).

116. (Previously presented) The isolated nucleic acid molecule of claim 115, wherein said first amino acid sequence is (f).

117. (Previously presented) An isolated nucleic acid molecule complementary to the isolated nucleic acid molecule of claim 104.

118. (Previously presented) The isolated nucleic acid molecule of claim 104, wherein said nucleic acid is DNA.

119. (Previously presented) The isolated nucleic acid molecule of claim 104, wherein said nucleic acid is RNA.

120. (Previously presented) The isolated nucleic acid molecule of claim 104, wherein said nucleic acid is double-stranded.

121. (Previously presented) The isolated nucleic acid molecule of claim 104, wherein said nucleic acid is single-stranded.

122. (Previously presented) A composition comprising the nucleic acid molecule of claim 104 and a carrier.

123. (Previously presented) The isolated nucleic acid molecule of claim 104 wherein the nucleic acid molecule further comprises a heterologous polynucleotide sequence.

124. (Previously presented) The isolated nucleic acid molecule of claim 123, wherein said heterologous polynucleotide sequence encodes a heterologous polypeptide.

125. (Previously presented) The isolated nucleic acid molecule of claim 124, wherein said heterologous polypeptide is human serum albumin.

126. (Previously presented) The isolated nucleic acid molecule of claim 124, wherein said heterologous polypeptide is a human IgG Fc region.

127. (Previously presented) A recombinant vector comprising the isolated nucleic acid molecule of claim 104.

128. (Previously presented) The recombinant vector of claim 127 wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

129. (Previously presented) A recombinant host cell comprising the isolated nucleic acid molecule of claim 104.

130. (Previously presented) The recombinant host cell of claim 129 wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

131. (Previously presented) A method for producing a polypeptide comprising an amino acid sequence selected from the group consisting of:

- (a) the amino acid sequence of the full-length TR13 polypeptide encoded by the cDNA contained in ATCC Deposit No. PTA-507;
- (b) the amino acid sequence of the full-length TR13 polypeptide encoded by the cDNA contained in ATCC Deposit No. PTA-507, minus the N-terminal methionine residue;
- (c) the amino acid sequence of the mature TR13 polypeptide encoded by the cDNA contained in ATCC Deposit No. PTA-507;
- (d) the amino acid sequence of the extracellular domain of the full-length TR13 polypeptide encoded by the cDNA contained in ATCC Deposit No. PTA-507;

- (e) the amino acid sequence of the extracellular domain of the full-length TR13 polypeptide encoded by the cDNA contained in ATCC Deposit No. PTA-507, minus the N-terminal methionine residue; and
- (f) the amino acid sequence of the extracellular domain of the mature TR13 polypeptide encoded by the cDNA contained in ATCC Deposit No. PTA-507;

comprising culturing a host cell comprising the nucleic acid molecule of claim 104 under conditions suitable to produce the polypeptide of (a), (b), (c), (d), (e) or (f) and recovering the polypeptide of (a), (b), (c), (d), (e) or (f).